

# INTERNATIONAL SEARCH REPORT

International Application No  
PCT/US2004/041815

**A. CLASSIFICATION OF SUBJECT MATTER**  
IPC 7 C12Q1/37 A61K35/00

According to International Patent Classification (IPC) or to both national classification and IPC

**B. FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)  
IPC 7 C12Q A61K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, BIOSIS, WPI Data, EMBASE

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 03/026403 A (DELTAGEN, INC; WISOTZKEY, ROBERT, G; KIRK, CHRISTOPHER, J) 3 April 2003 (2003-04-03) the whole document	1-10
X	EP 1 336 847 A (BIOFRONTERA PHARMACEUTICALS AG) 20 August 2003 (2003-08-20) the whole document	7
X	US 2003/224511 A1 (DOBIE KENNETH W) 4 December 2003 (2003-12-04) the whole document	7

-/-

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

\* Special categories of cited documents:

- \*A\* document defining the general state of the art which is not considered to be of particular relevance
- \*E\* earlier document but published on or after the international filing date
- \*L\* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- \*O\* document referring to an oral disclosure, use, exhibition or other means
- \*P\* document published prior to the international filing date but later than the priority date claimed

- \*T\* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- \*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- \*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- \*G\* document member of the same patent family

Date of the actual completion of the international search

29 August 2005

Date of mailing of the international search report

08/09/2005

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2  
NL - 2280 HV Rijswijk  
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,  
Fax: (+31-70) 340-3016

Authorized officer

Marinoni, J-C

# INTERNATIONAL SEARCH REPORT

International Application No  
PCT/US2004/041815

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	GUNCAR GREGOR ET AL: "Crystal structure of cathepsin X: A flip-flop of the ring of His23 allows carboxy-monopeptidase and carboxy-dipeptidase activity of the protease" STRUCTURE (LONDON), vol. 8, no. 3, 15 March 2000 (2000-03-15), pages 305-313, XP002342587 ISSN: 0969-2126 the whole document	7
A	WO 02/055726 A (THE GENERAL HOSPITAL CORPORATION; FAUSTMAN, DENISE, L) 18 July 2002 (2002-07-18)	
A	WO 99/31256 A (IMMUNEX CORPORATION; ANDERSON, DIRK, MICHAEL; NAKAGAWA, TERRY, Y) 24 June 1999 (1999-06-24)	
A	WO 96/36729 A (COULTER INTERNATIONAL CORP) 21 November 1996 (1996-11-21)	
A	WO 94/04172 A (PROTOTEK, INC) 3 March 1994 (1994-03-03)	
A	TROMBETTA E SERGIO ET AL: "Activation of lysosomal function during dendritic cell maturation." SCIENCE (WASHINGTON D C), vol. 299, no. 5611, 28 February 2003 (2003-02-28), pages 1400-1403, XP002342588 ISSN: 0036-8075	
A	LENNON-DUMENIL ANA-MARIA ET AL: "Analysis of protease activity in live antigen-presenting cells shows regulation of the phagosomal proteolytic contents during dendritic cell activation" JOURNAL OF EXPERIMENTAL MEDICINE, vol. 196, no. 4, 19 August 2002 (2002-08-19), pages 529-539, XP002342589 ISSN: 0022-1007	

-/-

# INTERNATIONAL SEARCH REPORT

International Application No  
PCT/US2004/041815

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	<p>SANTAMARIA I ET AL: "Cathepsin Z, a novel human cysteine proteinase with a short propeptide domain and a unique chromosomal location"</p> <p>JOURNAL OF BIOLOGICAL CHEMISTRY, AMERICAN SOCIETY OF BIOLOGICAL CHEMISTS, BALTIMORE, MD, US, vol. 273, no. 27, 3 July 1998 (1998-07-03), pages 16816-16823, XP002101278 ISSN: 0021-9258 cited in the application</p> <p>-----</p>	
A	<p>DEUSSING J ET AL: "Murine and human cathepsin Z: cDNA-cloning, characterization of the genes and chromosomal localization"</p> <p>BIOCHIMICA ET BIOPHYSICA ACTA . GENE STRUCTURE AND EXPRESSION, ELSEVIER, AMSTERDAM, NL, vol. 1491, no: 1-3, 25 April 2000 (2000-04-25), pages 93-106, XP004275618 ISSN: 0167-4781</p> <p>-----</p>	

# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/US2004/041815

## Box II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☒ Claims Nos.: **9, 10 partially**  
because they relate to subject matter not required to be searched by this Authority, namely:  
**Although claims 9 and 10 are directed to a method of treatment of the human/animal body, the search has been carried out and based on the alleged effects of the compound/composition.**
2. ☐ Claims Nos.:  
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

## Box III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this International application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/US2004/041815

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
WO 03026403	A	03-04-2003	WO 03026403 A2 US 2003159168 A1	03-04-2003 21-08-2003
EP 1336847	A	20-08-2003	EP 1336847 A1	20-08-2003
US 2003224511	A1	04-12-2003	NONE	
WO 02055726	A	18-07-2002	WO 02055726 A2	18-07-2002
WO 9931256	A	24-06-1999	AU 1926699 A WO 9931256 A2	05-07-1999 24-06-1999
WO 9636729	A	21-11-1996	US 5776720 A US 5698411 A US 5871946 A US 5733719 A EP 0832279 A1 JP 11505702 T WO 9636729 A1 US 5849513 A US 5905031 A US 5976822 A	07-07-1998 16-12-1997 16-02-1999 31-03-1998 01-04-1998 25-05-1999 21-11-1996 15-12-1998 18-05-1999 02-11-1999
WO 9404172	A	03-03-1994	US 5374623 A AT 180772 T AU 5019093 A CA 2142839 A1 DE 69325178 D1 DE 69325178 T2 EP 0667854 A1 JP 8502245 T WO 9404172 A1	20-12-1994 15-06-1999 15-03-1994 03-03-1994 08-07-1999 03-02-2000 23-08-1995 12-03-1996 03-03-1994